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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,517	01/16/2004	Mylavarapu Venkatramesh	16518.132	5271
28381 7590 01/18/2007 ARNOLD & PORTER LLP ATTN: IP DOCKETING DEPT. 555 TWELFTH STREET, N.W. WASHINGTON, DC 20004-1206			EXAMINER KALLIS, RUSSELL	
			ART UNIT	PAPER NUMBER
			1638	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		01/18/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/647,517

Applicant(s)

VENKATRAMESH ET AL.

Examiner

Russell Kallis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 71-90 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 71-85, drawn to recombinant DNA constructs and plants transformed therewith, classified in class 800, subclass 298.
- II. Claims 86-90, drawn to oil, classified in class 426, subclass 330.6.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are the DNA and plants transformed therewith of Group I and oil of Group II; wherein the oil of Group II does not share the structure of the DNA of Group I and does not comprise the DNA of the plants of Group I.

If Applicant elects Group I, Applicant should elect one set of DNA sequences from the following groups 1-25 or 26.

- 1) DNA encoding a 3-hydroxysteroid oxidase enzyme and a sterol acyltransferase enzyme.
- 2) DNA encoding a steroid 5.alpha.-reductase enzyme and a sterol acyltransferase enzyme.
- 3) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme and a sterol acyltransferase enzyme.

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- 4) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a tocopherol biosynthetic enzyme and a sterol acyltransferase enzyme.
- 5) DNAs encoding a steroid 5.alpha.-reductase enzyme, tocopherol biosynthetic enzyme and a sterol acyltransferase enzyme.
- 6) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a tocopherol biosynthetic enzyme and a sterol acyltransferase enzyme.
- 7) DNA encoding a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and a sterol acyltransferase enzyme.
- 8) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and a sterol acyltransferase enzyme.
- 9) DNAs encoding a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and a sterol acyltransferase enzyme.
- 10) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and a sterol acyltransferase enzyme.
- 11) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme and a sterol acyltransferase enzyme.
- 12) DNAs encoding a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme and a sterol acyltransferase enzyme.
- 13) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme and a sterol acyltransferase enzyme.

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- 14) DNA encoding a 3-hydroxysteroid oxidase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 15) DNA encoding a steroid 5.alpha.-reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 16) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 17) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a tocopherol biosynthetic enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 18) DNAs encoding a steroid 5.alpha.-reductase enzyme, a tocopherol biosynthetic enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 19) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a tocopherol biosynthetic enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 20) DNA encoding a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 21) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.

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- 22) DNAs encoding a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 23) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 24) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme, and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 25) DNAs encoding a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.
- 26) DNAs encoding a 3-hydroxysteroid oxidase enzyme, a steroid 5.alpha.-reductase enzyme, a 3-hydroxy-3-methylglutaryl-CoA reductase enzyme, a sterol methyltransferase enzyme and DNA encoding an S-adenosylmethionine-dependent .gamma.-tocopherol methyltransferase enzyme.

This requirement is not to be construed as a requirement for an election of species, since each of the nucleic acid sequences or amino acid sequences recited in alternative form is not a member of a single structurally and functionally related genus, but rather constitutes an independent and patentably distinct invention. Separate searches and considerations would be required for examination of each of the amino acid sequences.

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Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, the inventions require a different field of search (see MPEP § 808.02), and the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (571) 272-0798. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Russell Kallis Ph.D.
January 8, 2007

RUSSELL P. KALLIS, PH.D.
PRIMARY EXAMINER

Russell Kallis